



10+YEARS // 20+COUNTRIES // 200+PROJECTS



MINA RASHID MARINA • DUBAI



SERENITY MARINA CLUB • CHINA





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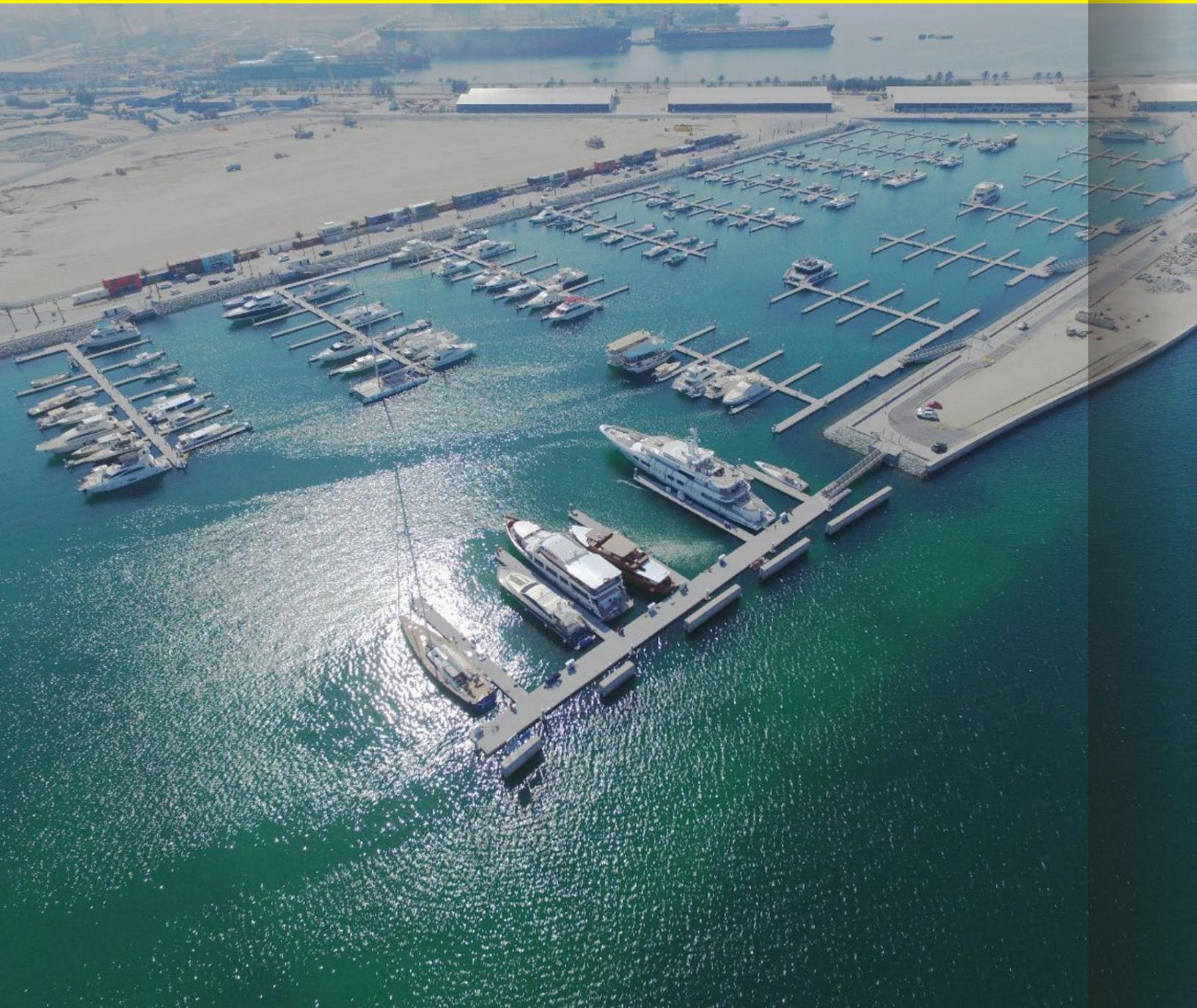
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BRIEF INTRODUCTION

Livart Marine, a member of Livart Group, was founded in 2007.

After more than a decade of continuous development, Livart Marine has built for itself a reputable well-known branding in the international scene. Amongst one of the most Professional Floating Pontoon companies, Livart prides itself as the one-stop customer-focused centre; involving from proposal stage to full engineering design, manufacturing, installation, testing & commissioning and final completion stages.

Livart Marine's unique premium floating solutions are clearly evidenced in our high-tech factories, covering 10,000 m² in Guangdong province, China, and offering high-quality engineered products at the most competitive and cost-effective prices. The company's patented aluminium system meets the requirements of UK's The Yacht Harbour Association, Australia Standards, and major safety standards.

To serve our clients directly and expeditiously, Livart set-up a network of branch offices and sub-companies in different countries and cities – Guangzhou, Beijing, Singapore, Dubai, Sydney, Bangkok.

Through the trust and confidence placed in our products and services, Livart Marine has outstandingly delivered and completed more than 200 marinas world-wide. Such achievements are continuing year after year, as Livart Marine constantly strives for excellence and to continually meet the exacting requirements of our clients from all over the world.

LIVART MARINE 10 YEARS HISTORY >>



BUSINESS GUIDING DIRECTIONS

OUR VISION:

To be the global innovator and key manufacturer for Floating Solutions; with special focus on floating pontoons.

OUR CORE VALUES:

We value our staff, suppliers, contractors, basing on the principles of honesty and trust, and being responsible for one another, in fulfilling our promises to our customers.

VALUE CREATION:

We are determined to value-add to our work processes, in creating solutions beneficial to our customers, and also to our human resources, in enriching their goals in lives.

COMMITMENT:

We are committed to keeping our promise to produce excellent products and services, meeting the necessary standards and specifications for our customers.



COOPERATE CULTURE

LIVART strongly believes corporate culture of humility, thrift, a sense of responsibility, enthusiasm, and flexibility in carrying our daily tasks in meeting our business objectives.

The outcome of our corporate performance depends not only on the turnover, or profits but also on the industry and social ethical factors, which are our foremost concerns.



FLOATING GARDEN • DOHA

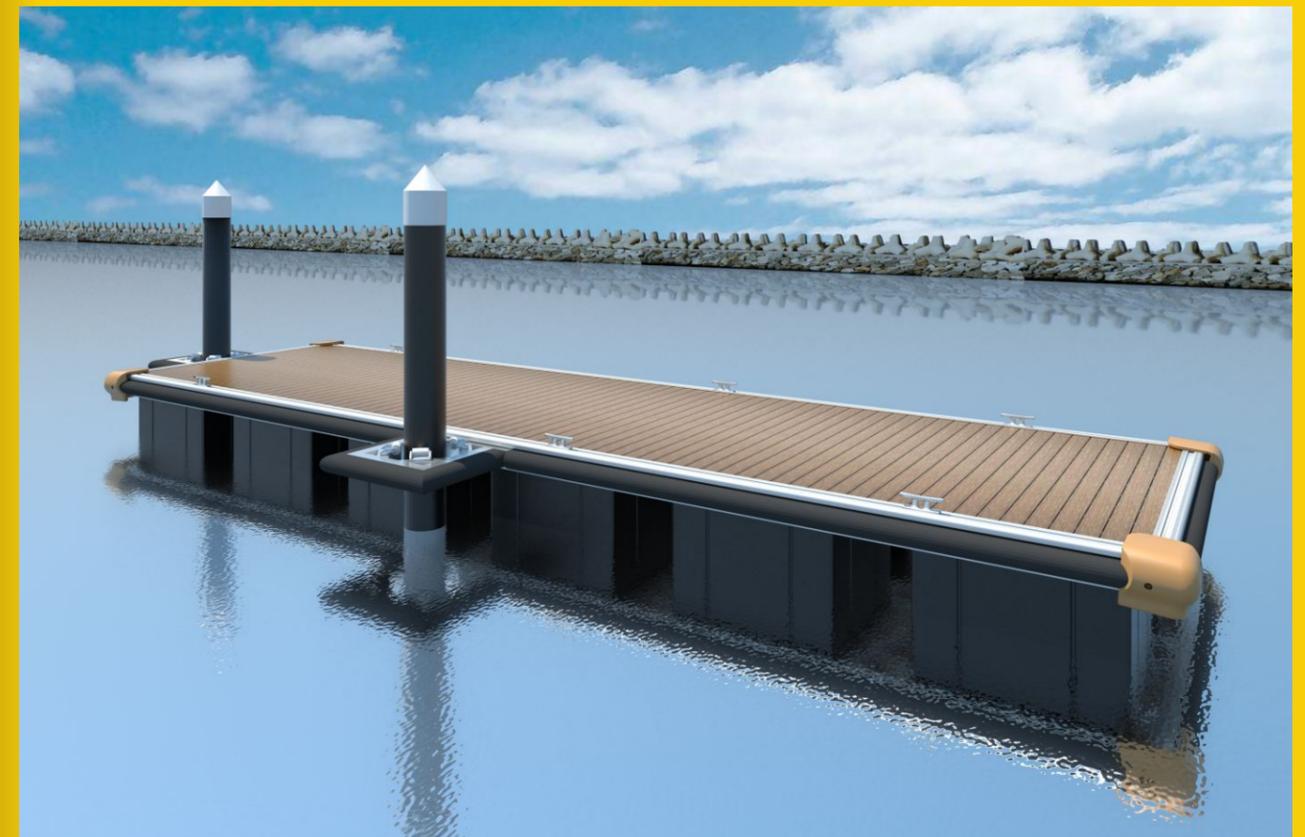
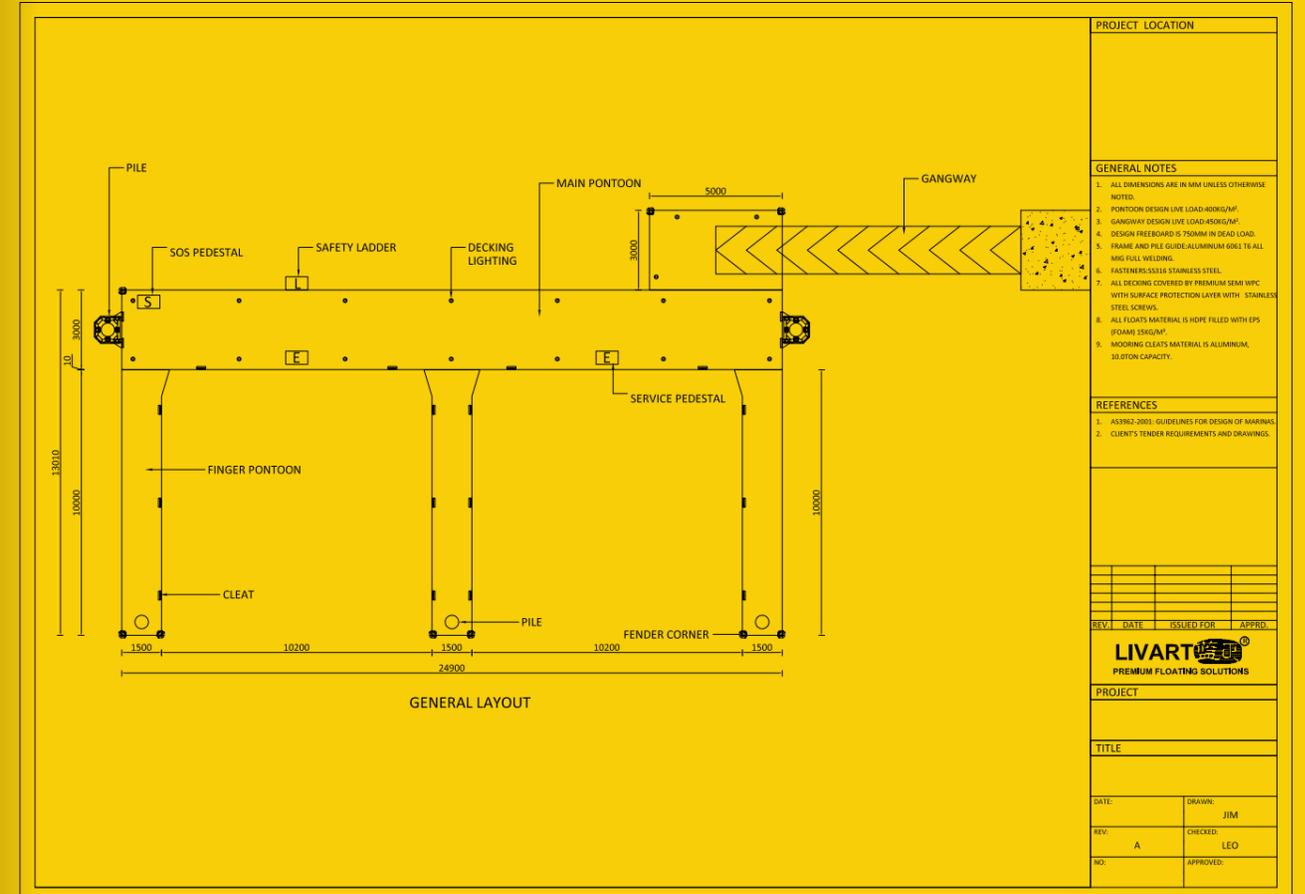
DESIGN STANDARD

Our design philosophy is based on current international standards, which consider marina site's environmental conditions. Livart Marine has developed full-set of engineering calculations taking into account important parameters, such as the Wave, Wind, Current and Boat impact. The different sizes and types of vessels would influence the different forces exerted onto the floating pontoon structural system; from mooring cleats to affecting the anchoring system eventually .

The anchoring systems can take the form of driven piles, chain block system, H-beam restraining system, and proprietary Seaflex and Dualdock systems. One innovative approach developed by Livart is its semi-flexible internationally-patented connection details, which make site installation much simpler and its ability to withstand and absorb wave forces .

CRITERIA

- .AS3962-2001 GUIDELINES FOR DESIGN OF MARINAS
- .BRITISH STANDARD : YHA
- .THE TENDER REQUIREMENT



LIVART STANDARD UNIT



MRM • DUBAI 25 METER LONG GANGWAY



YAS • ABU DHABI 33 METER LONG GANGWAY

ALUMINIUM GANGWAY

Livart Marine Aluminium Gangways are designed using proprietary in-house fabricated aluminium sections, with adequate strength and durability. The Gangways typically feature a pipe-truss design and TIG / MIG welded from 6005 T6 and 6061 T6 aluminium alloy. The surface decking material could be selected from composites, natural hard-wood , natural soft-wood. These decking are fixed onto the aluminium structural chassis with SS316 stainless steel screws, and assembled together with nylon-roller scroll wheels, aluminium alloy hinge and transition plates, roller and hinge pins, and fastened with screws in SS316 stainless steel.

All livart marine gangways are fabricated using specially specified appropriate materials of adequate strength and sufficient durability. all products undergo rigorous strict quality control checks before being transported out to sites.

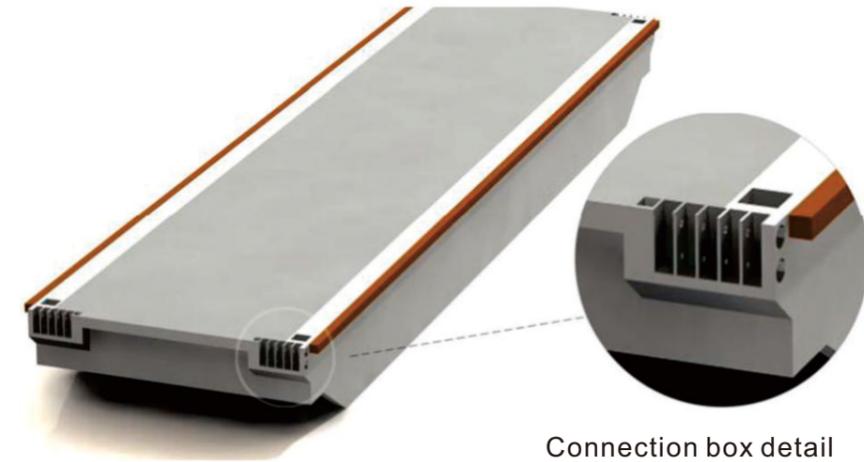


SHEN ZHEN BAY MARNIA 15 METER LONG GANGWAY

PRODUCT NAME	WIDTH(m)	LENGTH(m)	CAPACITY (N/m ²)
LIVART GANGWAY	0.90	4.0~9.0	2500~4000
	1.20	6.0~12.0	3000~4000
	1.50	8.0~16.0	3000~4000
	2.00	9.0~25.0	3000~4000
	2.50	10.0~25.0	3500~4500
	3.00	20.0~36.0	3500~4500

NOTES:

1. THE ABOVE SIZES ARE FOR REFERENCE ONLY .
2. MORE SPECIFICATION COULD BE CUSTOMIZED .



Connection box detail

FLOATING BREAKWATER

Product features

LIVART MARINE floating breakwaters are designed hydrodynamically to provide the best attenuation of wind waves. Structural design is according to Eurocode 2 and manufacturing quality is assured under the International Norm ISO 9001:2015.

LIVART MARINE treats every floating breakwater as a unique project, making a case - specific structural and hydrodynamic engineering study. The consideration of the installation as a "long floating articulated structure", fully guarantees the absence both of structural and joints problems in even the hard conditions.

Custom manufacturing allows many configurations as different head angles, special parts or ability to withstand traffic.

MATERIALS

- ❖ Reinforced concrete 50 MPa
- ❖ Self compacting concrete with fibres
- ❖ 100% epoxy coating steel
- ❖ EPS 15 kg/m³ interior
- ❖ Reinforced neoprene in connectors

ACCESORIES

- ❖ Service conduits
- ❖ Wood or plastic fenders
- ❖ Wood or composite deck
- ❖ Fixing guides for fingers
- ❖ Customized colours

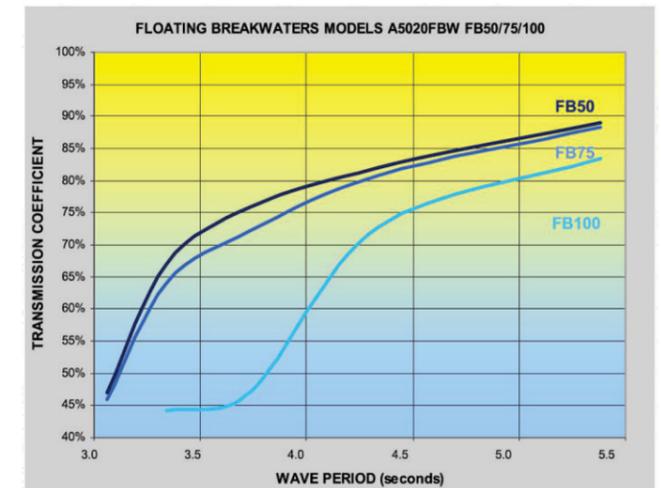
Product data and performance

Performance of LIVART MARINE floating breakwaters has been tested with the state of the art physical and numerical modelling.

Performance tests include both the hydrodynamic and the structural behaviour of the complete installation, including concrete modules, connectors, anchoring system and sinkers.

Laboratory results and finite elements modelization provide a secure way to ensure the performance.

A5020FBW	FB50	FB75	FB100
Length (m)	20	20	20
Width (m)	5	5	5
Height (m)	1.8	2.0	2.8
Freeboard (m)	0.5	0.8	1.0
Draft (m)	1.3	1.3	1.8
Weight (Tons)	54	57	67
Connectors axial strenght (kN)	2500	2500	3000
Connectors shear strenght (kN)	500	500	600
Max. bending moment for sway (kN.m)	12860	12860	15432





FUJARAH • UAE



MINA RASHID MARINA • DUBAI

CONCRETE PONTOON

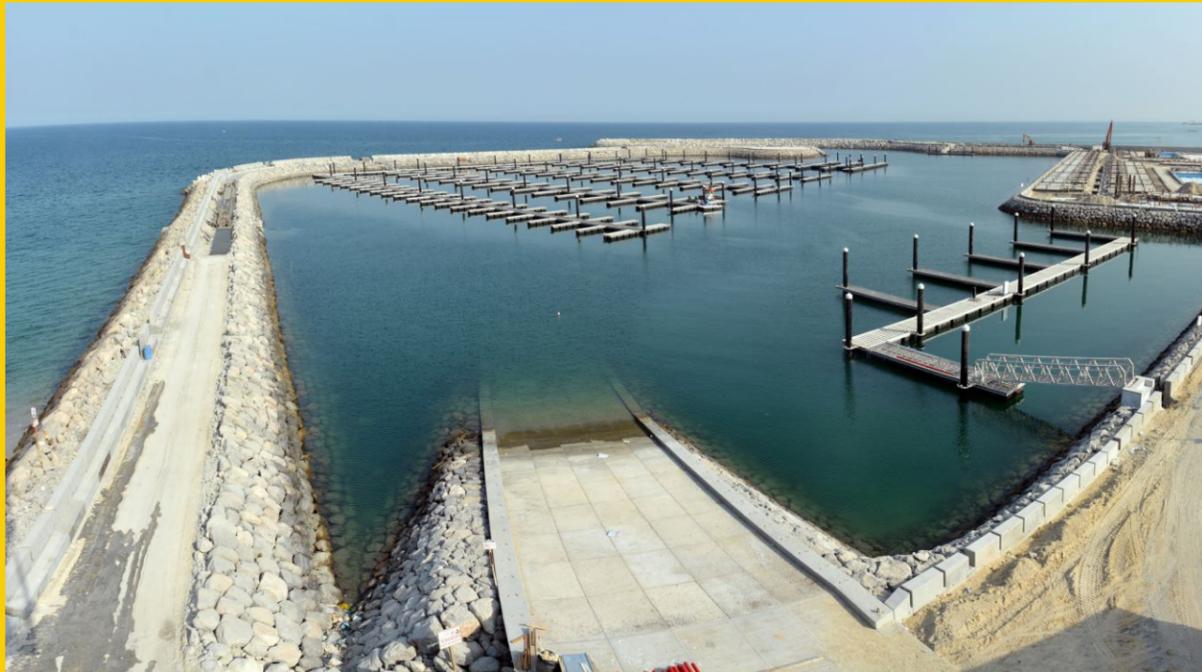
Livart Marine's Concrete and Heavy Duty Pontoons incorporate the latest know-how in pontoon technology and are extensively used in both small and large marinas .

Livart Marine's pontoons are connected by flexible rubber bolt joints, using marine grade materials to produce economical but very durable pontoons. Modules are available in a range of standard sizes; from 2400mm to 4500mm wide and weighing between 10 and 30 tons. A range of optional accessories can be incorporated to customize each specified system, which include different kinds of decking, cable ducts and service conduits. All Livart Marine's concrete pontoons are of robust construction, with a 50-year design lifespan.

Pontoon data :

1. pontoon width range 1.00~6.00 m
2. pontoon length range 6.00~18.00 m
3. live load range 400~600 kg/m²
4. freeboard range 300~500 mm
5. connection force 20~40 ton.





POLICE OFFICERS CLUB • KUWAIT



MOA FISHING PORT • GCC

ALUMINIUM PONTOON

MAIN PONTOON

Livart Marine's main pontoons are made from 6061 T6 or 6082 T6 marine-quality aluminium. All bolts and nuts use SS316 stainless steel. The Pontoon frame consists of 2 edge profiles connected to each other by crossbars and diagonals. The sizes of these components depend on the berthing forces and wave stresses. All accessories can be attached or slid into positions.



NATIONAL GAME



SHENZHEN BAY MARINA

FINGER PONTOON

Livart Marine's mooring fingers are classified into 6m to 10m long light boat booms, 11m to 18m long standard fingers and 12m to 30m long super yacht fingers. The fingers are fitted to the main pontoons by Livart Marine's semi-flexible patented rubber joints to match the different frame material and design. The height of the floats is adjustable making the berth suitable for most freeboards. The fingers are equipped with all-round PVC or rubber fenders and mooring cleats, offering safe and stable mooring always for various vessels. Livart Marine's mooring fingers can be secured either by driven piles, chain or Seaflex systems, and have been designed for easy installation with long lifespan.

- 1.marine grade aluminium alloy 6082 t6 , 6061 t6.
- 2.hardwood / composite decking , fix to the chassis with ss316 screws
- 3.high density polyethylene floating , closed cell with 15 kg/m3 eps.
- 4.marine rubber fenders , providing excellent energy absorption.
- 5.joined to the main pontoon by ss316 bolts with neoprene for shock-proofed and wave absorption .
6. mooring cleats in ss316
7. adjustable aluminum pile guide

STEEL PONTOON

Livart Marine's Steel pontoon has the superiority of high durable performance, structural adequacy and good stability. The steel pontoon structures are fully welded and hot-dip galvanized to the required specifications. The deck material can be of natural Hardwood, Wood Polymer Composites or Treated wood. The component parts are connected to the main frames by SS316 stainless steel .



SUZHOU • CHINA



HAINAN • CHINA



HYBRID PONTOON SYSTEM

Increasingly, Livart Marine's hybrid pontoon system is getting popular world-wide through the many enquiries received.

The concrete walking platform is extremely stable with high imposed load capacity, and versatile for utilities installation within the concrete pontoon.

Vessels are moored directly onto the aluminium-framed fingers, which have the attributes of being both stable and cost-effective.



NAVAL MARINA



NAVAL TRAINING SCHOOL • INDIA

AL-JUBAIL NAVAL BASE • KSA

JEDDAH PORT NAVAL BASE-1 • KSA

Livart Marine started building Naval / Coast Guard marinas since 2007; with the first project located at the Red Sea, Persian Gulf. Following the successful completion of the first project, Livart Marine had built for itself a good reputation and valuable experience. To date, Livart Marine has installed more than 20,000m² of pontoons for naval marina and facilities and the 'story' is continuing.



JEDDAH PORT NAVAL BASE-2 • KSA



DAMMAN PORT NAVAL BASE-1 • KSA



DAMMAN PORT NAVAL BASE-2 • KSA



PERTH • AUSTRALIA



BAHRAIN • GCC



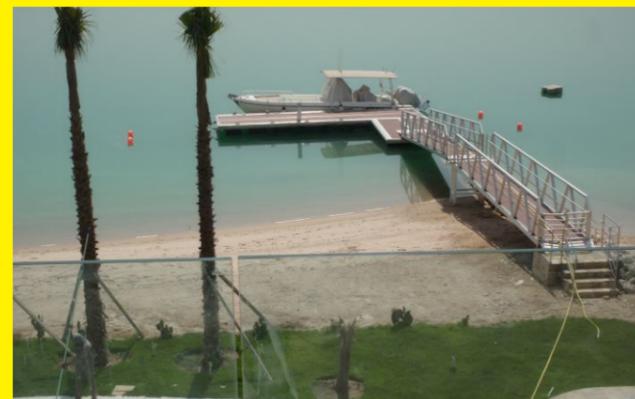
CHANGJIA • SHAGNAHI



THAILAND



JIULONGSHAN • SHANGHAI



QATAR



PERTH • AUSTRALIA



MALE • MALDIVES



HANGZHOU • CHINA

PRIVATE JETTY

As a private jetty is very much owner-specific, Livart Marine is mindful and focus on pontoon detailing to meet the owner's expectation.

In the past 10 years, Livart Marine installed more than 100 sets of private jetties worldwide, and has received accolades from satisfied clients.



SHANGHAI • CHINA



FISHING PORT • GCC



AJMAN • UAE



RAK • UAE



DAMMAN • KSA



DAMMAN • KSA

FISHING PONTOON

Aluminium floating pontoons are ideal for fishing marina. Livart Marine is able to design for freeboards, ranging from 450 mm to 900 mm to suit various fishing vessel sizes. As the fishing activities entail support for heavy equipment and workers, imposed loading capacity is necessary, typically from 2,000N to 5,000N per m².

Livart Marine has many years of experience in providing various types of fishing marina, in our commitment to build many such projects in Gulf Cooperation Council (GCC) countries.

HEAVY DUTY PONTOON



POLICE OFFICERS CLUB • KUWAIT



JEDDAH • KSA



Heavy duty marina is generally designed for large vessels, such as super yachts, police coast guard patrol boats, naval boats , tug boats , etc .

Livart Marine's heavy-duty floating pontoons are calculated based on Wind-Wave-Currency and vessel impact forces. Imposed loading capacity for heavy duty pontoon is typically more than 3.50kPa, with freeboard usually higher than 750mm, and having super strong connection of the joints between pontoons.

There are other special considerations, including mooring cleat and composite decking having to be heavy-duty, and floats needing to be much thicker, with considerable concrete ballast, to maintain stable buoyancy on water.

Floating swimming pool:

An ingenious way of creating a clean swimming facility within a natural water body, Livart Marine specialize in constructing Floating Swimming Pool, using either concrete or aluminium structural systems, with its bottom and inner walls made of HDPE/GRP. Apart from the standard of size can be 12m length x 6 m width, larger sizes are available on request and can be designed for; allowing for a sense of safety and security for swimmers when “immersing within water within water”.



Floating House:

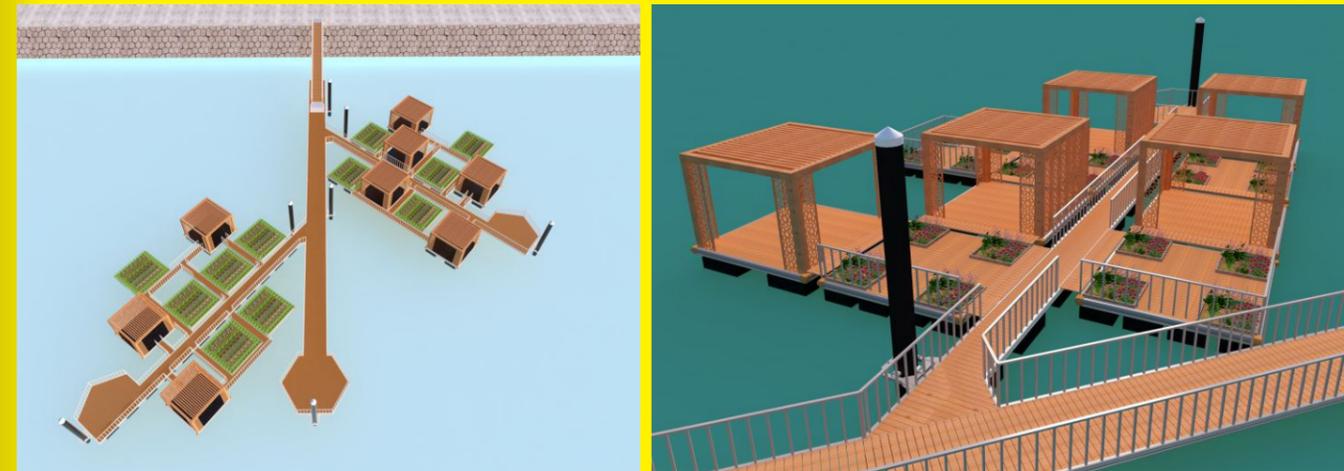
Livart Marine is currently working jointly with Sentai manufacturer who specialize in Wood Polymer Composites (WPC) material, to develop Floating Houses. The synergy of Livart Marine providing the floating base structures, while Sentai focus on building a wide spectrum of WPC buildings, is most beneficial for our customers.



CUSTOMIZED SOLUTIONS

Floating Garden:

Livart Marine’s unique Floating Garden was developed in-house, taking into account a gardener’s dream, with safety handrail all around, cabana shade structures, and ample planting troughs for various farming. Computerized design which considered vertical and horizontal loading ensures that the supporting structures are of adequate strength and stability to promote plant growth.



Floating Landing Facility for Sea Planes / Helipad:

As amphibious aviation gains popularity, floating landing facility for sea planes / Helipad are needed. Livart Marine pays special attention to such pontoon design, taking care to make provisions for aviation safety equipment, such as flexible fenders, service utilities, aviation navigation markers, lighting and mooring systems. These are essential to meet the strict regulations imposed by both Civil Aviation Agencies and local Port Authorities.



FLOATING



MALAYSIA



SHENZHEN • CHINA

NAVAL BASE • INDIA

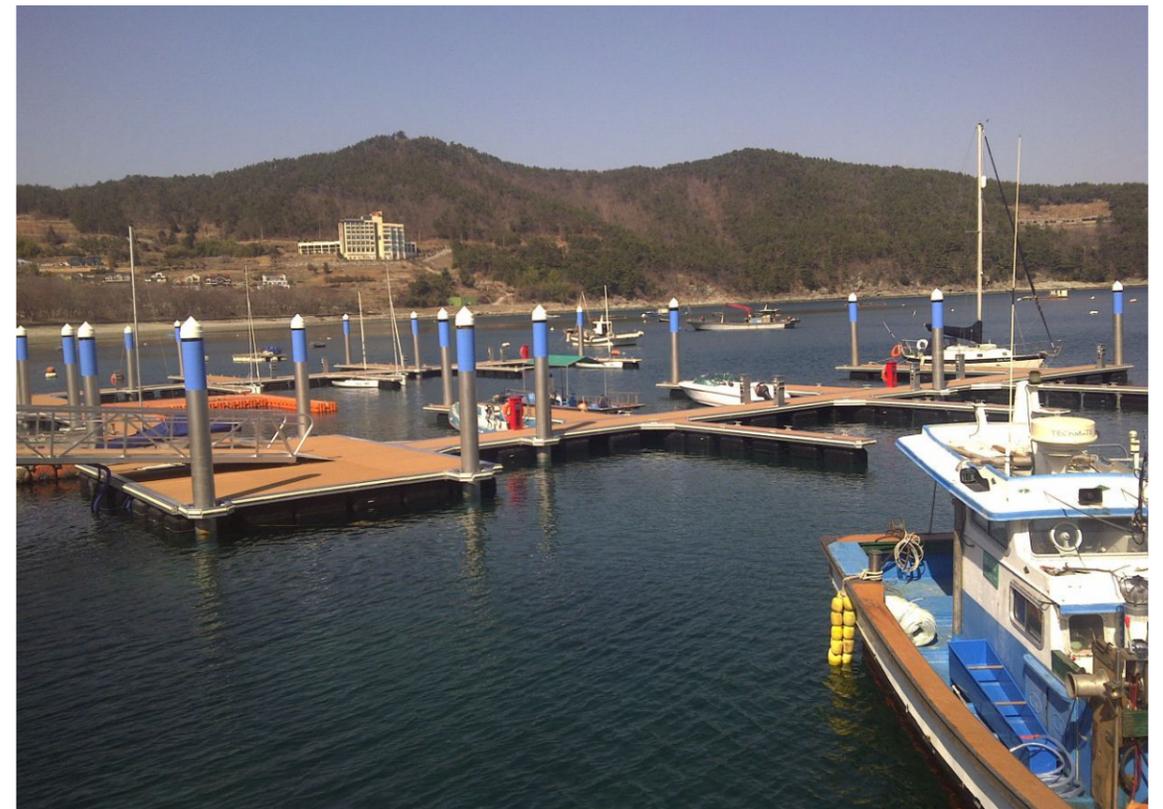
JEDDAH • KSA

Livart Marine's floats are made of high density polyethylene material .

It is of mono-bloc rotational 2 skins in construction, with attributes such as ultra-violet ray resistant, fire propagation proofed, closed cell with expanded polystyrene foam , one time figuration , density of EPS of at least 15 kg/m^3 . The floats are attached to the main pontoon chasis by SS316 bolts. Arising from the need to maintain the right freeboard, concrete ballast was used to maintain a stable buoyancy. With no detrimental corrosion, no electrolytic action under salt-water circumstance, its durability is ensured. Warranty : 20 years.



MALTA



MARINE TRAINING SCHOOL • KOREA

DECKING



MOI • KUWAIT



DECKING WITH EDGE PROTECTION

BALAU (BANGKIRAI)

Balau (Bangkirai) is a weather-resistant tropical hardwood, which makes beautiful outdoor decking. Its fine well-oiled grain, and high capacity of oil and iron protects it from distortion, corrosion, dampness, etc. In addition, its strength, high density and durability makes it ideal for outdoor industrial purposes like marina pontoon, access bridges, marina and seaport construction.



PHNOM PENH • CAMBODIA



WOOD POLYMER COMPOSITES (WPC)

Livart Marine's Wood Polymer Composites Decking is a durable environmentally friendly decking material. It is made of plastic and wood, tempered by high temperature, under scientifically designed production formula.

The color, shape and size can be customized.

Undoubtedly, Wood Polymer Composites is one of the most appropriate materials for marina surface decking.

Feature of Composites:

- water-proof
- moisture-resistant
- anti-corruption
- color stable
- nail-able
- drill-able

FIBRE-REINFORCED POLYMER (FRP)

Fibre-Reinforced Polymer (FRP) composite material is a high performance material which is produced by mixing a certain proportion of the fiber material and the matrix material, and is formed by the extrusion from the special moulds. Because of the variety of resins used, it is also known as polyester fiberglass, epoxy fiberglass and phenolic glass steel. Although light, it has sufficient mechanical strength properties, not conductive, and is corrosion-resistant.



WHITE COLOUR

YELLOW COLOUR

GREY COLOUR

BLACK COLOUR

FENDER

Compared with other fenders, Livart Marine's fender has a lower spring constant during its earlier stage of deflection, and is thus easily deformed until fully compressed. With such a characteristic, anchor bolt arrangement is not necessary to be so precise during installation.

Livart Marine's fender displays higher energy absorption capacity. It can be mounted on quay walls by means of anchor bolts.



QINGWANG ISLAND • CHINA





10 T SS316

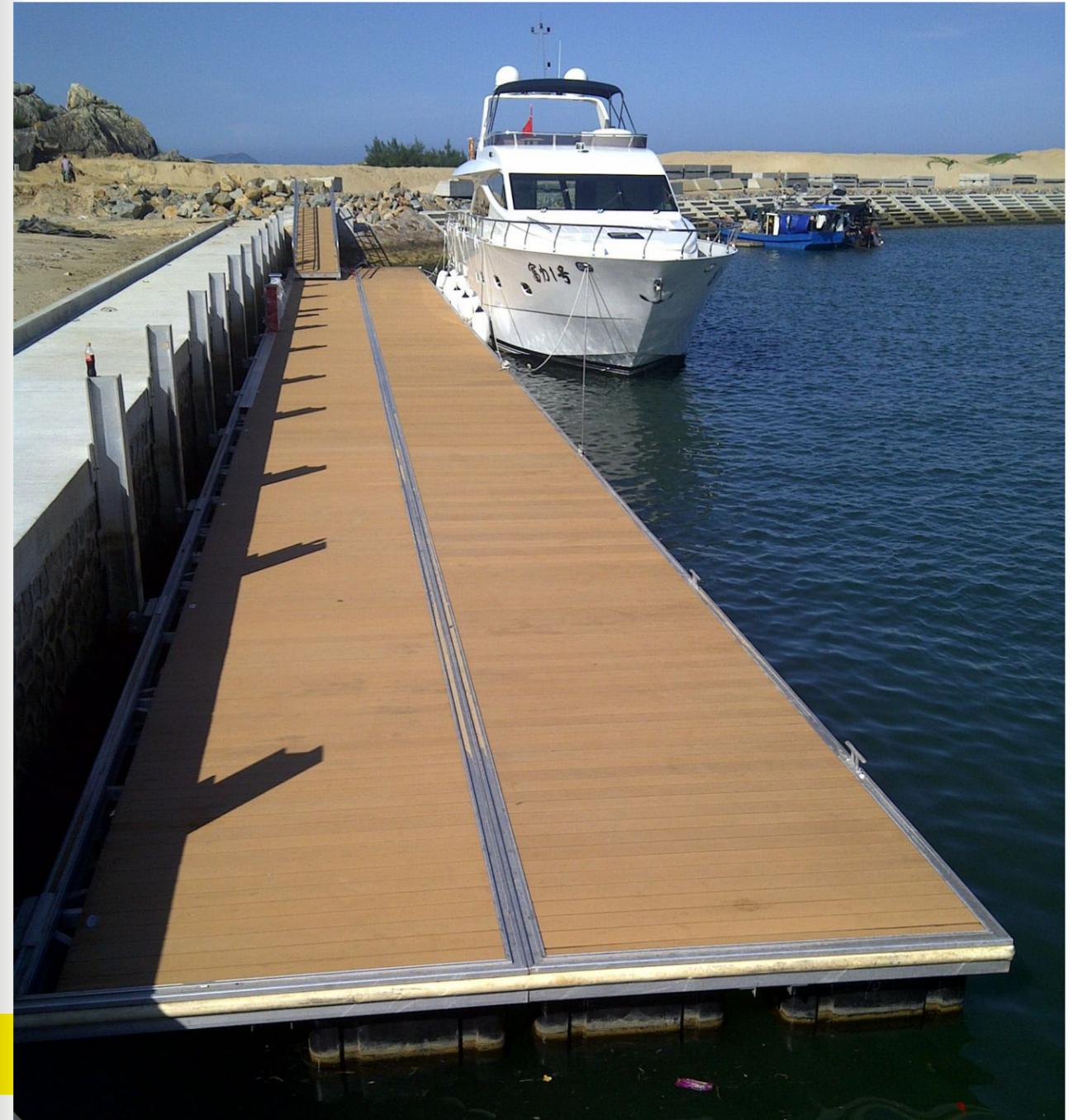


10 T ALLOY

MOORING CLEAT

PRODUCT NAME	MATERIAL	BOATS SIZE(m)	CAPACITY (SWL / TON)	NO (PC/BERTH)
MOORING CLEAT	A356	≤10.0	3.0	3 PCS
MOORING CLEAT	A356	≤15.0	5.0	4 PCS
MOORING CLEAT	SS316	≤20.0	10.0	5 PCS
MOORING CLEAT	SS316	≤35.0	15.0	6 PCS
MOORING CLEAT	SS316	≤40.0	20.0	8 PCS

Livart Cleat fixes to the pontoon by means of M18 Aisi 316 stainless screws.



FULI MARINA CLUB • CHINA



5 T SS316



5 T ALLOY



20 T ALLOY



PILE GUIDE

Pile mooring is usually adopted when water level variations are large. The pontoon structure is moored to the piles through pile guides.

Livart Marine's pile guides are designed for mooring all types of pontoon structures. Dynamic theoretical calculations have been considered for the design of the pile guide. Made from aluminium 6061 T6, desirable attributes are its strong weld connection, low friction polyethylene wearing blocks and rubber fenders installed all round. The position of the pile guide is adjustable to suit the piles already driven on site.



KUWAIT



ISTANA JETTY • BRUNEI



ANCHORING



SEAFLEX The Mooring System



H-BEAM



With the Seaflex mooring system, pontoons are moored to ground sinkers with pre-tensioned fibre rubber ropes. The system is strong and the pretensioning stabilizes the pontoon, keeping it in place regardless of water level variations. The system is easy to install and has a long lifespan due to its corrosion resistant components .

One seaflex can have up to 25 strands fiber rubber rope, each of which can withstand a 10 kN load , and is suitable for use with all pontoons from lighter timber pontoon to breakwater pontoon.

One of seaflex biggest benefits is its unique way of stabilizing the pontoon by always being under tension. The dampening effect also leads to less wear and tear , especially under bad weather sea conditions .



- Main advantages :
- .100% no impact on underwater world
 - .no play regardless of water level differences
 - .highest damping characteristics
 - .lower installation and maintenance costs



What is the dualdoker
Mooring system for pontoons
Two (or more) hard anodised aluminium arms are fixed to the quay wall on one side and to the floating pontoon on the other side. At the interface, the dualdoker ball has a free range of movements in all directions.

UTILITIES

SERVICE BOLLARD : WATER , ELECTRICITY , SOS



The Quantum's design embodies the qualities of our world leading Classic pedestal, complemented by the strength and aesthetics of modern marine grade anodised extruded aluminium.

SANITATION PUMP-OUT SYSTEMS



SANITATION PUMP-OUT SYSTEMS TO SUIT ANY BUDGET

Rolec offer a comprehensive range of free-to-use or pay-to-use sanitation pump-out systems, from a single communal pump-out pedestal to a 100 point marina-wide system.



LIVART IDENTIFICATION

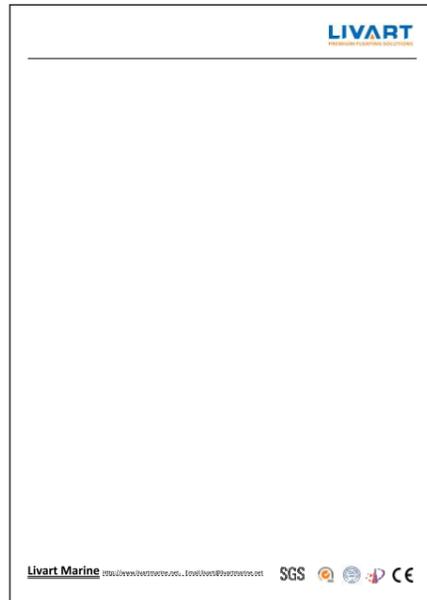
BUSINESS CARD



LOGO



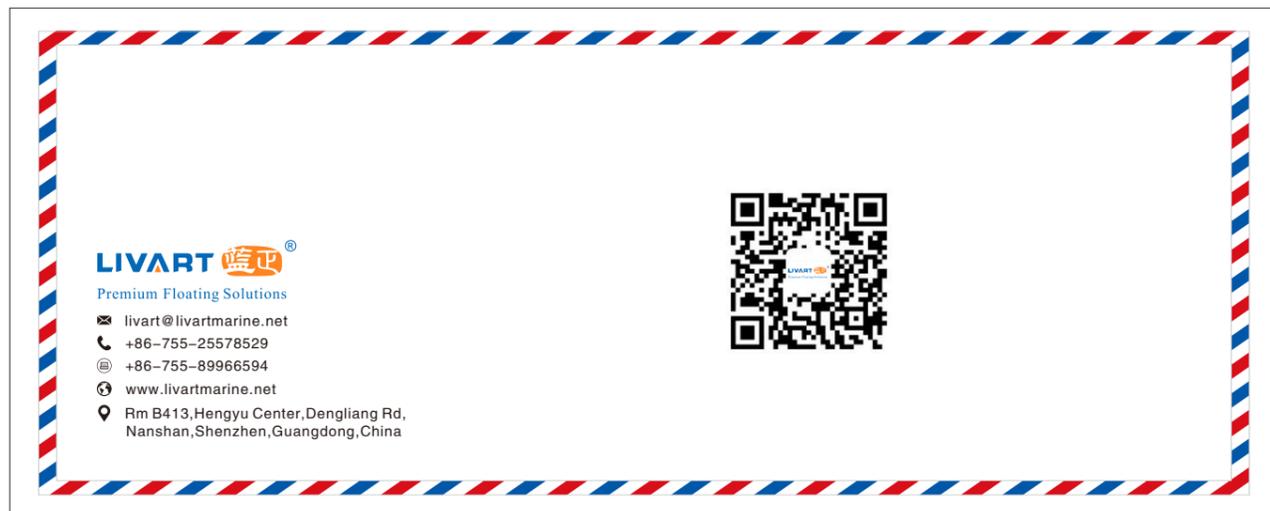
HEADLINE



ENVELOPE



WORK UNIFORM



CERTIFIED BY:



MAIN CLIENTS:



MAIN SUPPLIERS:



ASSOCIATED WITH:

